

# Active Bones

MARCH 2011



## ORTHOPAEDIC SURGERY AND SPORTS MEDICINE TEACHING AND RESEARCH FOUNDATION

### THIS ISSUE INCLUDES:

Protecting Young  
Pitchers from Injury



### *Upcoming Topics:*

Knee Ligament Injuries • Traveler's Workout  
Tommy John Surgery • Heat Illness

Dear Reader,

ACTIVE BONES is the official newsletter of the Orthopaedic Surgery and Sports Medicine Teaching and Research Foundation (OTRF). The newsletter is a brief, easy-to-read educational piece that provides continuing education about musculoskeletal injuries, health performance, and new research and development in the field of Orthopaedic Surgery and Sports Medicine.

Please contact us at [www.otrfund.org](http://www.otrfund.org) or [stevenchudikmd@hoasc.com](mailto:stevenchudikmd@hoasc.com) with any questions, suggestions for any specific topics that may be of interest to you, or if you just wish to be added to the distribution list to receive this publication directly.



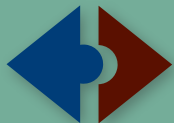
Sincerely,

Steven C. Chudik MD.  
Orthopaedic Surgeon  
OTRF Founder and President

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NEWSLETTER DIRECTLY



## Protecting Young Pitchers From Injury



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Baseball has been referred to as America's pastime and more than 11 million young people play baseball each year in the United States. Along with this high level of participation comes an increased incidence of injury. Studies have shown that approximately 50% of young baseball players report elbow or shoulder pain at some point during their career. There are critical steps that can be taken to help protect these young players and help them avoid injury.

The majority of baseball injuries are overuse injuries. The repetitive nature of pitching places pitchers at highest risk of these injuries. The throwing motion subjects the elbow to significant forces of tension, shearing, and compression. Improper throwing mechanics and overuse can significantly increase this strain and result in recurrent "microinjuries". This repetitive stress can lead to real pain and inability to throw for the young athlete.

"Little League Elbow" (or medial apophysitis) is a condition where the repetitive throwing forces across the medial (inside) elbow cause stress injury/fracture to the growing bone attachment sites (apophysis). This occurs most commonly in boys ages 13-15 and girls ages 10-12. As players get older, these same forces can



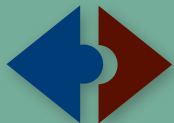
Arrow marks a fracture to the medial (inside) epicondyle of the elbow in a young pitcher.

lead to ulnar collateral ligament injuries, which sometimes require surgery to reconstruct ("Tommy John" surgery). Both injuries are characterized by pain on the inside of the elbow especially with throwing. The athlete may develop swelling, clicking and tenderness and may have difficulty straightening their arm. It is critical that baseball players with elbow pain from throwing be seen by a sports medicine physician for thorough evaluation.

### How Much Is Too Much?

One of the best ways we can protect our young pitchers is to limit how much and how often they throw. Research has shown that when a pitcher throws too many pitches or does not recover adequately, they have a significantly increase risk for injury. For many players, baseball has become a year-round sport. The combination of overuse and a growing and developing skeleton can lead to permanent injury with life-long consequences. It is recommended that all pitchers: take at least 3 months off from throwing each year, avoid pitching on multiple teams with overlapping seasons, limit pitching with radar guns and in "showcase" tournaments, and should be monitored with pitch counts to avoid overthrowing.





## Protecting Young Pitchers From Injury continued

### The 2010 Little League Baseball Pitch Count Regulations Are As Follows:

Age	Pitches per game
9-10	75
11-12	85
13-16	95
17-18	105

### The 2010 Little League Baseball Pitch Count Regulations Are As Follows:

Pitches per game	Calendar days rest required
1-20 pitches	no (0)
21-35 pitches	one (1)
36-50 pitches	two (2)
51-65 pitches	three (3)
66 pitches	four (4)

### Pitchers League Age 15-18 Must Adhere To The Following Rest Requirements:

Pitches per game	Calendar days rest required
1-30 pitches	no (0)
31-45 pitches	one (1)
46-60 pitches	two (2)
61-75 pitches	three (3)
76 pitches	four (4)

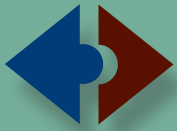
No throwing guidelines are perfect and if a pitcher complains of fatigue or pain, they should be rested from further pitching. It is important that a pitcher learn proper throwing mechanics from a young age. Learning to use one's legs, hips and trunk properly will help minimize the stress on the throwing arm. A pitching coach or Athletic Trainer can help in identifying potentially harmful errors in throwing form. It is also important for pitchers to learn proper stretches and warm-up before throwing.

Currently, the Orthopaedic Surgery and Sports Medicine Training and Research Foundation (OTRF) has partnered with the American Orthopaedic Society for Sports Medicine (AOSSM) to sponsor a simple online survey study to investigate throwing and its relationship to shoulder and elbow overuse injuries in developing pitchers between the ages of 9-18. The survey results will be useful in further protecting young athletes from these types of preventable injuries.

Parents with children between the ages of 9 and 18 can participate in this survey study by simply visiting the OTRF website at [www.otrf.org](http://www.otrf.org) and clicking on the "Baseball Pitcher's Survey" button to begin. The opening page provides parental information and you must click on the "Yes" button to agree to participate. It should take only 10-15 minutes to complete. If you have any specific questions regarding the survey, please do not hesitate to contact the principle investigator, Dr. Steven Chudik, at 630-794-8668 or [stevenchudikmd@hoasc.com](mailto:stevenchudikmd@hoasc.com).

Playing baseball should be fun; and, with some proper guidance, a young thrower can enjoy the game without injury.





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## DONATION REQUEST

### We Need Your Help

OTRF can't do it without you. There is no question that health-care is expensive and difficult for most to afford; however, to continue to make important advances in healthcare, we need everyone's help to fund research and education. To conduct its work, OTRF has been fortunate to receive large donations from larger, more affluent parties and organizations; but, it still thrives mostly on small donations from many different individuals. Most donations come from the many patients and families that Dr. Chudik directly touches in his practice. Often, it is no more than the price of a Starbucks cup of coffee; but every donation, large or small, makes a difference. Thank you for your support.

**Thank you  
for your support.**

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## Orthopaedic Surgery and Sports Medicine Teaching and Research Foundation is Committed to Research and Education



ORTHOPAEDIC SURGERY AND SPORTS MEDICINE  
TEACHING AND RESEARCH FOUNDATION

OTRF was founded by Dr. Steven Chudik in 2007 and is a non-for profit organization dedicated to funding research and education for the purpose of keeping people active and healthy.

Injury to and degeneration (wear and tear with use and age) of our musculoskeletal system (our joints and cartilage, muscles and tendons, bones and ligaments) threaten our ability to stay active, work, and lead healthy lifestyles. Too many individuals are getting injured or developing arthritis at younger and younger ages. At alarming rates, little leaguers are injuring their elbows, young female athletes are rupturing their anterior cruciate ligaments (ACL), weekend warriors are tearing their meniscus, golfers are missing the season with rotator cuff tears, physical laborers are getting injured and are unable to work, and young adults are unable to stay active because of debilitating arthritis.

There is a great need to disseminate knowledge amongst our community so that we can better prevent these injuries and degeneration (wear and tear) and best preserve our ability to stay active and healthy. We also need to fund unbiased, quality, and cutting edge research to develop better and less invasive methods to prevent and manage these injuries and degeneration.

To meet these needs, OTRF produces the newsletter, "ACTIVE BONES," shares information regarding health performance related issues of nutrition and fitness, hosts Athletic Training educational programs, conducts local educational seminars for health care providers and the community, and most importantly funds research and development particularly in the areas of cartilage injury and repair; sports injury prevention; knee ligament injury prevention and reconstruction; and minimally invasive surgery for fracture, tendon, ligament, cartilage and joint repair.